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ABSTRACT

This study followed a child born in a bilingual (English and Spanish) family who had daily exposure to both languages since birth. The study examined how bilingual acquisition proceeded in this child who was receiving different, often contradictory, cues from the structure of the two languages. The family lived in Barcelona, Spain, and the child attended a British English school. Spanish was his strongest language. Researchers used a picture book story to elicit responses and examine his development of reference to space and spatial relations. Sessions were taped yearly from age 6 years 11 months to age 10 years 11 months (first in English, then in Spanish 10 days later). Analysis of transcriptions indicated that for this bilingual child, development of the expression of movement was different in the two languages. He lagged behind in the use of manner verbs and combinations of movement verb + satellite in English, and he compensated for this by using deictic verbs. Change of location verbs have a stronger influence in English in than in Spanish when using the indefinite article for the first mention of inanimate objects. However, in both languages, the encoding of characters' movements did not receive adequate attention in his narratives. (SM)

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The Development of Reference to Space in a Narrative Task of a Spanish/English Bilingual Child from the Age of 7 to 11.

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I. INTRODUCTION

In the construction of a narrative discourse, reference to space contributes to narrative cohesion in conjunction with other discourse organizers, such as reference to person and time. When spatial relations are part of an extended piece of discourse, the objects that are spatially related will need to be identified as new or old information. Languages differ in the procedures that they use, but both in English and in Spanish, indefinite articles are obligatory markers of newness. A central element in the encoding of spatial relations is the verb, together with its objects and its satellite. Verbs in a narrative can be initially divided into those which intrinsically refer to spatial relations, for example, *run, be, fall* ... and those which make reference to other relations which are non-spatial, but which can occur in a clause in which the whole of the predicate indicates location. In the sentence

(1) *then he opened* ***the window***

the affected participant, '*the window*', also indicates that the agent is performing the action 'at the window'.

Verbs of the first type, those which denote spatial relations, are part of what Talmy (1985) has termed 'motion event', defined as 'a situation containing movement or the maintenance of a stationary location alike'. Languages distinguish between static location as in (2), and dynamic location as in (3). In this case, the motion event also indicates a change of location:

(2) The boy is in the bedroom
(3) *The dog fell in the water*

Talmy (1985) identifies four semantic entities in a motion event:

Figure: the object which is moved or located
Ground: the object with respect to which the figure is moved or located
Motion: presence of motion or location
Path: the course followed or the site occupied by the figure with respect to the ground.

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These four elements may be encoded linguistically in the following manner:

(4) *Pauline* *went* *into* *the school.*
[Figure] [Motion] [Path] [Ground]

Additionally, motion events can indicate 'Manner' *Pauline* ***slipped*** *into the school* or 'Cause' *Pauline* ***pushed*** *the boy into the school.* The languages of the world differ in the way they conflate[1] these components in the clause. Spanish and English belong to two different groups in terms of Talmy's typology. Spanish encodes Motion and Path in the verb and indicates Manner separately, generally with a gerundive complement of the motion verb *El niño salió corriendo*. On the other hand, English conflates Motion and Manner in the main verb and specifies Path separately by means of a particle *The boy ran out*. Slobin (1996) has further examined Spanish and English lexicalization patterns by considering motion events in elicited narratives and in twentieth-century novels in these two languages. In narratives, event motions are often complex 'journeys' that stretch across clauses. The Path or Trajectory is often described in much detail as taking place between a *source* and a *goal* (two different types of 'Ground'). However, the amount of detail in the description of movement varies greatly from Spanish to English. Spanish uses a much smaller set of movement verbs and includes fewer ground elements in clauses. English accumulates particles and prepositional phrases around one motion verb in a way that is not found in Spanish. For example, for (5), Spanish will use two verbs, as in (6):

(5) I ***went into*** *the hall and* ***through*** *to the dining room.*
(6) ***Entré*** *en el hall y* ***pasé*** *al comedor.*

Spanish tends to elaborate on static descriptions of Settings and leaves Trajectories to be inferred:

(7) *y el niño cayó* ***donde había un lago.***

Slobin (1996) contends that there are a number of factors that affect the way English and Spanish deal with motion events. Certainly, language typology has a crucial role, but also the particular type of lexicon (English has an abundance of motion verbs while Spanish does not) and certain constraints on the type of constructions that are permitted in the language all interact in the creation of a rhetorical style which guides the native speaker in the selection of the semantic components to be linguistically encoded. The question that has not been sufficiently addressed as yet, especially at the ages of the subject of this study, is the way in which bilingual acquisition proceeds in the case of a bilingual child who is receiving different and often contradictory cues from the structure of the two languages.

II. SUBJECT, MATERIAL AND DATA COLLECTION

The subject of this study, Jan, is the first-born child in a bilingual family (English/Spanish). He is a case of Bilingual First Language Acquisition as defined by De Houwer (1990:3): (1) from the moment of birth he has been exposed to the two languages, and (2) his exposure has been regular since he has, for the most part, been in contact with both languages on a daily basis. In terms of Romaine's (1995) classification of types of bilingual acquisition in childhood, Jan belongs to the type, 'One Person – One Language', that is, his mother has always spoken to him in Spanish and his father always in American English. The family lives in Barcelona, the capital city of Catalunya, a bilingual Catalan/Spanish autonomous community in Spain. At the age of 3;1, Jan started attending a British English school where Catalan and Spanish children follow an English immersion programme. In the playground, however, children interact with each other mostly in Spanish. Thus, the opportunities that Jan has to interact in English are reduced to speaking to his father, to North American relatives on the telephone or on yearly visits, and to his teachers. Despite this fact, Jan's teachers' general appreciation of his English in the realization of school tasks is that he would be almost indistinguishable from a native English-speaking child. Outside the classroom, however, his stronger language is Spanish, or at least it is the language in which he feels more confident when speaking.

The picture book story *Frog, where are you?* (Mercer Mayer, 1969) was chosen as elicitation material. In this story, the protagonists, a boy and a dog, have a pet frog who escapes. The boy and the dog attempt to recapture the frog on several occasions until the end of the story when they finally find it. The narratives were recorded at school by a teacher at yearly intervals from the age of 6;11 to 10;11, first in English and about 10 days later in Spanish. Thus, this study is based on longitudinal data consisting of five narratives in Spanish and five in English.

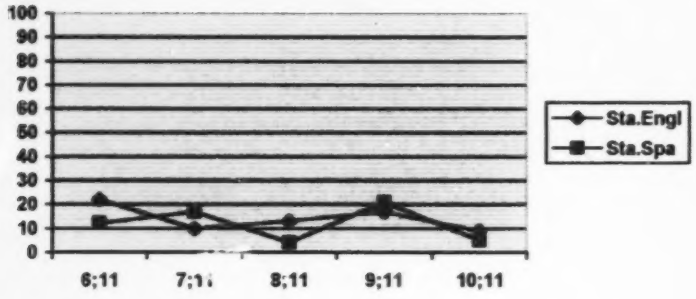
The transcriptions of the tapes were done according to CHAT guidelines (MacWhinney, 1991) and the utterances were divided with the clause as the basic unit of analysis, as described in Berman & Slobin (1994).

III. RESULTS AND DISCUSSION

a. Verbs indicating position

Figure 1 shows the percentages of stative verbs:

Figure 1. Development of stative verbs



The results show, first of all, a similar percentage in both languages of stative verbs for each age. The story at 10;11 exhibits the lowest percentage of stative verbs. In English, the percentages vary from 22% in the earliest story to 9% in the latest. In Spanish, there is the same tendency as in English for a sparcer use of stative verbs in favour of locative predicates with more semantic content: the percentages of stative verbs vary from 12% in the earliest story to 5% in the latest.

Most clauses that indicate position are formed using the verbs *to be* and *estar*. The variety of prepositions used with these verbs is similar in both languages. Each year, between two and three new prepositions are added to the initial list at age 6;11 to a total of approximately 14 different types in the five narratives in each language. Thus, the relational concepts established by the prepositions that Jan uses with verbs indicating position display a parallel development in both languages.

In the earliest narratives, clauses contain only one prepositional phrase. At age 7;11, in the two languages, there are two prepositional phrases strung together:

(8) *the boy shouted* ***in*** *a hole* ***in*** *the ground* (7;11)
(9) *y después el niño miró* ***por*** *un agujero* ***en*** *el suelo* (7;11)

At age 10;11, Jan is able to include three prepositional phrases in one clause (although only two are locative in example 10):

(10) *and the dog was looking* ***out of*** *the window* ***with*** *the pot* ***in*** *his face* (10;11)

The development in terms of position, therefore, proceeds in a very similar fashion in the two languages.

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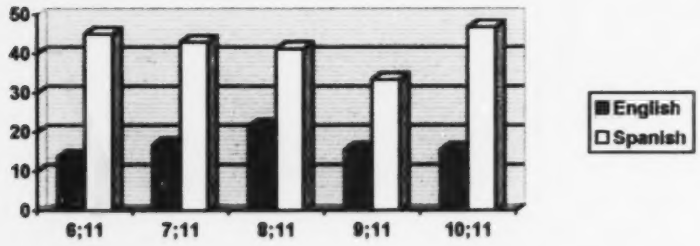
b. Verbs indicating movement

Next, we have identified which semantic components of the motion event are encoded in the verb itself, paying special attention to direction and manner, the two components which are conflated differently in English and in Spanish.

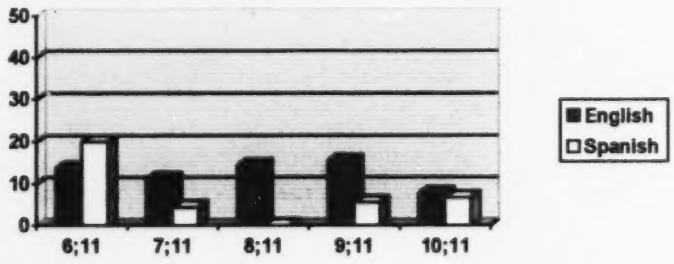
Figure 2. Percentage of verbs expressing direction



The expression of direction constitutes the greatest difference between the two languages. In Spanish, verbs indicating direction, for example, *subir, salir, caer,* outnumber those in English, as can be seen from Figure 2. Taking the five stories together, a total of 42% of movement verbs in Spanish express direction, whereas only 16% of them do so in English.

Verbs expressing manner are infrequent in both languages, as Figure 3 shows (3 types in each: *run, jump, climb* and *correr, andar, resbalarse*). Taking the 5 stories together, a total of 13% of movement verbs in English and 10% in Spanish express manner.

Figure 3. Percentage of verbs expressing manner



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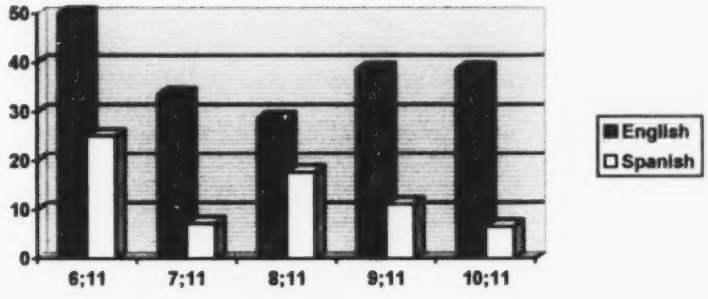
Taking all the movement verbs together, a total of 13 different types have been attested in the English data and 23 combinations of movement verb + a satellite particle. In Spanish, 19 types have been identified. These results become more significant if we compare them with Berman & Slobin's (1994) monolingual children and adults. Their results show a total of 27 types of verbs used by Spanish speakers compared to 47 verbs used by English speakers. Compared to monolingual children, Jan's variation in terms of movement verbs is very limited. The difference between Jan's English verbs and those used by monolinguals in the above study is even more striking when we compare the 123 combinations of English verbs + satellites that have been attested in the English monolingual stories. His Spanish stories are close to those of Spanish-speaking adults, whereas his English stories are not. Moreover, more than a third of Jan's movement verbs are deictic verbs (*come* and *go*) in his English narratives, although a development with age is also evident, as shown in Figure 4.

Deictic verbs in English are very frequent, especially in the earlier narratives. Most cases correspond to the verb *go*, which combines with a higher number of particles than any other movement verb. As can be seen from Figure 4, the number of these verbs is still very high at age 10;11. In Spanish, except for the first narrative, deictic verbs are not as common.

Figure 4. Percentage of deictic verbs



Another issue which requires examination concerns the number of ground elements encoded outside the verb itself, that is, the goal where the movement finishes, the source of the movement, and the path that the movement follows. Most typically, it is the goal that is encoded in both languages, as Table 1 shows. The source is sometimes included and, in English, direction as well. The surprising fact is that, with age, fewer ground points are included, contrary to Berman & Slobin's (1994) results which show that children progressively mention more ground points in their stories as they become older.

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Table 1. Number of ground points in locative expressions outside the verb

	6;11	7;11	8;11	9;11	10;11	Total
Goals						
English	4	4	5	3	1	**17**
Spanish	7	5	4	2	3	**21**
Source						
English	3	1	2	2	2	**10**
Spanish	2	-	1	4	2	**9**
Direction						
English	11	4	4	5	7	**31**
Spanish	-	-	1	-	-	**1**

As regards what Slobin (1996) has termed 'journeys', particularly relevant to this story are three types: downward, upward and emerging. The journey may be completed in one clause (11) or in several clauses (12):

(11) *The dog fell off the window* (8;11)
(12) *and the dog was looking out **of the window** with the pot in his face / then, suddenly, the dog **fell** / all the glass broke **in the floor*** (10;11)

For the downward journeys, 'falls' have been considered (dog from window, beehive from tree, boy from tree, boy and dog into pond). The coloured columns indicate those movements carried out by the characters in the story that have not been made explicit in Jan's stories. So, for example, in the downward journey at age 9;11 in Spanish, the boy is not be described as falling off the tree as a result of the owl scaring him (13):

(13) *el niño intentó buscar un agujero dentro del árbol pero también **le quitó del camino un búho*** (9;11)

Table 2. Downward journeys

English					Spanish				
6;11	7;11	8;11	9;11	10;11	6;11	7;11	8;11	9;11	10;11
1. Boy from window									
√	√	√	√	√		√	√	√	√
2. Beehive from tree									
√	√	√	√	√		√	√	√	√
3. Boy from tree									
√		√		√	√		√		√
4. Boy and dog into pond									
√	√	√	√	√	√	√	√	√	√

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For upward movement, 'climbs' have been considered (boy onto tree, boy onto rocks, boy onto deer's antlers). Upward movement suffers a reversed pattern of development with the last stories lacking some of the journeys. This may result in the listener having to infer the missing information. The following example from age 8;11 in English will show the communicative inadequacy:

(14) *... a hamster went out of the hole and hit the boy. The dog threw to the ground the beehole and they all went against him. The boy fell in the floor because the owl hit him* (8;11)

The boy falls down, but there is no mention in the previous clauses that he actually climbed the tree from which he falls down.

Table 3. Upward movement

English					Spanish				
6;11	7;11	8;11	9;11	10;11	6;11	7;11	8;11	9;11	10;11
1. Boy climbing tree									
√	√				√	√			
2. Boy climbing rocks									
√	√	√	√		√	√	√		
3. Boy going up the deer's antlers									
√	√	√	√	√	√	√		√	√

Finally, Table 4 shows the results of 'coming out and appearances' where a participant moves out of the place where he was previously situated (frog coming out of jar, hamster out of hole, owl out of hole, little frogs out from behind the plants).

Table 4. Coming out journeys

English					Spanish				
6;11	7;11	8;11	9;11	10;11	6;11	7;11	8;11	9;11	10;11
1. Frog's escape									
√	√	√	√	√	√	√	√	√	√
2. Hamster's appearance									
√		√	√				√	√	√
3. Owl's appearance									
√	√		√	√	√		√		√
4. Little frogs' appearance									
√		√	√	√				√	√

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The frog's escape is central to the plot as it is the event that triggers the rest of the story. It is therefore always mentioned and from a young age the source is included in the same clause. However, other appearances, like the hamster's or the owl's are less relevant to the story. Emerging and upward movements are the most susceptible to be left out. A possible explanation is that it is the case that downward movement is often apparent from the pictures with, for example, a drawing of the boy and the dog falling mid-air, whereas this is not the case for the other two types of journeys.

c. First mention of inanimate objects

Hickmann *et al.* (1998) have shown that the type of predicate in a clause exerts an impact, among other things, on the appropriateness of the first mention of inanimate objects. In particular, with change of location predicates, their English and French children used the lowest percentage of indefinite articles. The following two figures show the percentages of first mention of inanimate objects in relation to the type of predicate:

Figure 5. Percentage of first mention of inanimate objects in relation to the type of predicate - Spanish

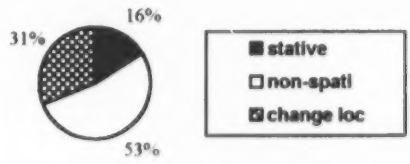
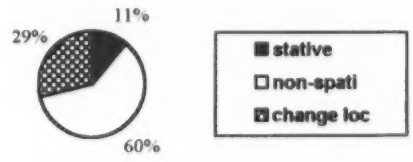


Figure 6. Percentage of first mention of inanimate objects in relation to the type of predicate - English



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In both languages, Jan uses more often non-spatial predicates to introduce the inanimate objects which will serve as the background for the action. In this story, most of the cases of non-spatial verbs refer to verbs of searching or calling and these are the verbs that most frequently introduce a new background for the unfolding of the action:

(15) *the boy* ***looked*** *on top of* ***a log*** (10;11)
(16) *el niño* ***miró*** *por dentro de* ***un árbol*** (10;11)

On the other hand, stative verbs are not at all frequent to introduce new objects, especially in the latest stories. These verbs include presentatives and verbs of possession, but Jan uses them very sparingly when introducing inanimate objects:

(17) ***there was a tree*** *there* (10;11)
(18) *y entonces el niño pensaba que* ***había un árbol*** *delante de él* (7;11)

With stative verbs, an indefinite article is always to be found. Regarding non-spatial verbs, in Spanish, although there is vacillation between definite and indefinite articles with non-spatial verbs, the use of the indefinite seems to be established at age 9;11. In English, there are twice as many definite articles as there are indefinite at all ages, i.e., there is no consolidated developmental pattern. However, the greatest difference between the two languages can be observed in the verbs that indicate change of location. In Spanish, there is similar use of both definite and indefinite articles across ages (44% definite vs. 56% indefinite), but in English there is almost exclusive use of the definite article with this type of verb (81% definite vs. 19% indefinite).

IV. CONCLUSION

For this bilingual child, an area has been identified in which the development of his two languages cannot be said to be proceeding at a similar pace. As regards the expression of movement, Jan is lagging behind in the use of manner verbs and combinations of movement verb + satellite in English and he compensates this by using deictic verbs. Change of location verbs also have a stronger influence in English than in Spanish when using the indefinite article for first mention of inanimate objects. However, in both languages, the encoding of characters' movements does not receive adequate attention in his narratives. Other bilingual children similar to Jan need to be studied to determine whether this difficulty in the handling of movement verbs is due to the difference in lexicalization patterns or not.

NOTES

1. 'Conflation' is a term coined by Leonard Talmy in his 1972 Ph.D dissertation.

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